

## RT-PCR USEFULNESS IN MICROBIOLOGICAL DISCHARGE DECISIONS FOR COVID-19 PATIENTS

### To the Editors:

The Cuban Ministry of Public Health's Protocol for Attention to COVID-19 Patients establishes that case confirmations are determined by positive virological tests of persons with and without symptoms.[1] These studies are carried out for SARS-CoV-2 by real-time polymerase chain reaction (RT-PCR) in specimens of respiratory mucosa collected via nasopharyngeal swab. The Protocol also establishes three types of discharge: microbiological (based on negative RT-PCR), clinical-imaging (no signs or symptoms and negative chest scan) and epidemiological (14 days after negative RT-PCR). A microbiological release from hospital is warranted when a patient tests negative by RT-PCR at nine days after testing positive.[1]


For organizing case management, it becomes important to assess the usefulness of this RT-PCR at nine days post-confirmation. At the Pedro Kourí Tropical Medicine Institute, we analyzed the percent of patients who tested negative on day 9, as well as those testing negative on days 10–14, 15–21 and 22–28. All COVID-19 patients released from the Institute from April through August 2020 were included: 153 total, 95 symptomatic and 58 asymptomatic.

RT-PCRs were negative on day 9 for 75% of cases (115), with statistically significant differences between symptomatic and asymptomatic patients: 68.4% of symptomatic (65) and 86.2% of asymptomatic (50) ( $p = 0.0228$ ).

For the remaining groups, symptomatic and asymptomatic patients tested negative post diagnosis as follows:

- 10–14 days: 10 symptomatic (10.5%) vs. 4 asymptomatic (6.9%);
- 15–21 days: 15 (15.8%) vs. 2 (3.4%); and
- 22–28 days: 5 (5.3%) vs. 2 (3.4%).

The fact that 75% of patients tested negative on day 9 validates the usefulness of the current clinical conduct and its impact on reducing hospital burdens, freeing up beds for other patients if necessary.

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## COVID-19 AND DIABETES: HANDLE WITH CARE


### To the Editors:

As the latest issues of *MEDICC Review* reveal, the global scientific community is fully engaged in unraveling the mysteries of COVID-19, including its relationship to chronic conditions such as diabetes mellitus (DM), a frequent comorbidity with SARS-CoV-2 infection. Various studies report up to 30% of persons with COVID-19 are diabetic,[1] and such patients are at greater risk of intrahospital deaths from the disease.[2]

Huang's meta-analysis in China reviewed 30 studies assessing 6452 cases showed that DM patients had worse prognosis (RR 2.38 [CI 95%: 1.88–3.03;  $p < 0.001$ ]) and higher risk of death (RR 2.12 [CI 95%: 1.44–3.11;  $p < 0.001$ ]), severe COVID-19 (RR 2.45 [CI 95%: 1.79–3.35;  $p < 0.001$ ]) and disease progression (RR 3.31 [CI 95%: 1.08–10.14;  $p = 0.04$ ]).[3] Diabetic patients with compromised immune systems and those aged >65 years also had greater risk of dying from COVID-19.[4]

Among the physiopathological factors relating COVID-19 with DM is over expression of angiotensin converting enzyme 2 (ACE2), above all in those patients treated with ACE2 inhibitors for comorbidities or diabetic complications, as well as the cytokine storm induced by glucolipid disorders.

These observations give us ample warning of the need to protect DM patients in the context of COVID-19. However, circumstances provoked by the pandemic, in which specialist consults and follow up for these patients have been limited, can contribute to deteriorating disease control. The lack of physical activity coupled with the stress brought on by social isolation further aggravates the situation for those living with diabetes. Thus, it is left up to patients and their families to pay greater attention to self-care and safety measures.

Health systems and their professionals must seek alternatives that facilitate personalized medical care in the context of the pandemic, including telemedicine options. At the same time, health professionals are challenged to continuously update their knowledge concerning DM and its relation to COVID-19. 

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